



UvA-DARE (Digital Academic Repository)

Organizational dynamics in social networks : contracts and reputations in the film industry

Ebbers, J.J.

Publication date
2009

[Link to publication](#)

Citation for published version (APA):

Ebbers, J. J. (2009). *Organizational dynamics in social networks : contracts and reputations in the film industry*.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Chapter 1:

Introduction

“As a society, we have become obsessed by connectedness. We are struggling to make sense of the complex networks that have infiltrated our lives, networks whose reach is immense, whose structures we can only dimly perceive, and whose functioning bewilders us.”

Steven Strogatz, 2003

The science of networks and the film industry

In 1994 a group of students in the United States invented the Kevin Bacon game. Kevin Bacon is an American film actor who starred in films such as *Footloose*, *Flatliners* and *Hollow Man*. The idea of the game is to link any actor to Kevin Bacon in the smallest number of steps, by using information about actors that co-starred in films. The number of steps needed to link a particular actor to Kevin Bacon is the so-called Bacon number. For example, Sarah Jessica Parker of the series *Sex in the City* has a Bacon number of 1, as she featured with Kevin Bacon in *Footloose*. Dutch actor Frank Lammers has a Bacon number of 2. He was in the film *Zwartboek* with Garrick Hagon, who was in the film *Balto* with Kevin Bacon. This offline game soon evolved into an online version with the name ‘The Oracle of Bacon’ and became a very popular website in 1996. Instead of human memory, the Oracle of Bacon used information from the Internet Movie Database (IMDb) website to calculate the shortest path from any actor to Kevin Bacon. It turned out that nearly all actors can be linked to Kevin Bacon in four

steps or less. In a later study it was found that the average number of steps between *any* actor and *any* other actor turned out to be even less than four (Watts, 2003: 94).

The Kevin Bacon game is an illustration of the small world phenomenon as it is known in the science of networks. In the 1960's Stanley Milgram was one of the first to conduct an experiment to study this phenomenon. He and his colleague Jeffrey Travers randomly selected 296 so-called 'starting persons' and a 'target person'. The starting persons, the majority of which were living in the state Nebraska, had to make sure that a package reached the target person, a stockbroker living in Boston, through a chain of personal acquaintances. All senders were urged to send the package to acquaintances they knew by first name, and of which they believed would most efficiently, or in the least expected number of steps, reach the target person. It turned out that the average number of steps for the package to reach the Boston stockbroker was less than 6 (Travers & Milgram, 1969). The idea that every person is connected to any other person in less than six steps has been popularized by a play in 1990 with the title 'six degrees of separation', which was adapted into a film in 1993 starring Will Smith, with a Bacon number of 2.

Short path lengths between individuals at the global level, as illustrated by the Kevin Bacon Game, is only one of the two structural features of so-called small world networks. The second structural feature of small world networks is high local clustering among actors, where actors should be interpreted in the general sense and not confused with the specific subgroup of film actors. An example of high clustering at the local level is a close-knit neighborhood community of friends and family within the larger network of the state or country. Small world networks are those networks that are characterized as having both these structures of short path length and high local clustering. Small world networks allow for infectious diseases, computer viruses, and novel ideas to spread throughout the network at a very high speed (Watts, 1999). Research on social networks, however, has led to many more insights about social network structures and the benefits it provides to certain groups or individuals.

As opposed to overall network structure and connectivity, social network research also focused on the *strength* of ties between actors by distinguishing between strong and weak ties. In the Milgram and Travers study, the 'starting persons' and the Boston stockbroker were connected through a chain of weak ties between acquaintances, as opposed to strong ties between close friends or family. Strong ties, for example between members of close-knit neighborhood communities, provide a better basis for the development of norms, trust, cooperation, and efficient communication (Coleman, 1990; Reagans & McEvily, 2003; Hoang & Antoncic, 2003; Levin & Cross, 2004). Weak ties, on the other hand, are more likely to become channels of diverse, unexpected and non-redundant information and valuable in acquiring information about new ideas, innovations or job opportunities (Granovetter, 1973).

Finally, social network research can focus on the *positions* of actors within the overall network structure and the positive and negative implications for those who occupy it. Network centrality, for example, measures the extent to which an individual is centrally positioned within a particular network. Centrally positioned individuals are close to any one else in the networks, and is measured in terms of a low average number of steps to all other individuals in the network (Freeman, 1979). High centrality increases the chances of getting hold of valuable information such as gossip or becoming infected by diseases that are spread by viruses. Building on theories of weak ties, Burt argued that there is a need for accumulating bridging ties, or establishing ties with individuals that are distant in the network, in order to access non-redundant information and new ideas (Burt, 1992). Entrepreneurial success, for example, can be explained by a combination of high intra-industry network centrality and a high number of extra-industry bridging ties (Stam & Elfring, 2008).

Theoretical background and empirical setting

The general aim of this thesis is to understand network structures and organizational dynamics in the empirical setting of the Dutch film industry. Films, especially in the Netherlands, are one-off ventures where individuals, or small firms, collaborate in temporary alliances in project-based organizations (PBO) that dissolve once the project, for which it was specifically set up, is completed (DeFillipi & Arthur, 1998). Freelancers in these types of industries need to balance the benefits of weak ties for acquiring information about new film projects, with those of strong ties that allow for more efficiency and shared trust. Trust allows for easier contractual relations between members of alliances (Gulati, 1995b), and has a positive effect on alliance performance, especially when there is high behavioral uncertainty (Krishnan, Martin & Noorderhaven, 2006). This behavioral uncertainty plays a particularly important role in the film industry because setting up film projects are complicated puzzles of matching agendas of freelancers and agreeing on each individuals' terms and conditions. Arguably more important, participation and its terms and conditions are contingent upon who else has agreed to join the project, such as prior commitment of a star director. When certain individuals decide to leave the project it may reopen the bargaining process with all others all over again (Caves, 2000: p. 107).

The first theme of this thesis is to study the organizational benefits of serially collaborating professionals in project-based industries. Transaction costs economics (TCE) is based on the insight that contracting in markets is costly and organizations provide an alternative means of coordinating economic activity (Coase, 1937; Williamson, 1981). First, there are search and information costs involved in finding out whether products are available on the market and at what price. Second, there are costs involved in bargaining out contracts concerning the price, quality, delivery and other conditions of the exchange. Finally, there are costs involved in policing and enforcing the contracts to make sure that the terms of the contracts are met and legal action taken if this turns out not to be the case. TCE sees organizations as an

alternative governance structure in case of market failure due to high transaction costs. Informal organizations of freelancers and small companies that often collaborate in series of projects, or so-called latent organizations (Starkey, Barnatt & Tempest, 2000), are also expected to benefit from lower transaction costs.

As opposed to transaction costs economists there are also researchers that emphasize the benefits of organizations as such, instead of regarding them as a second-best alternative to market exchange. The resource-based view of the firm (RBV) (Wernerfelt, 1984; Barney, 1991) proposes that the continuity of organizations allow them to build organization-specific resources that provide a competitive advantage. Within the RBV there is a subset of studies that specifically focus on knowledge as an essential resource. Successful firms are able to efficiently create, integrate and transfer knowledge within the organization (Kogut & Zander; 1992; Grant, 1996; Conner & Prahalad, 1996; Wijnberg, 2004). Other researchers posit that members of organizations are more willing to accept incomplete contracts and are more flexible in terms of the tasks they have to perform or the responsibilities they have. In addition, compared to market contracting, organizations are also more flexible in the kinds and the timing of rewards it gives to its members creating organizational efficiencies in the process (Simon, 1991; Ghoshal & Moran, 1996).

Contracts that govern exchange relations can be placed on a continuum from short-term transactional contracts on the one end, to long-term relational contracts on the other (MacNeil, 1980, 1985). The terms of exchange in transactional contracts are predominantly explicit while those of relational contracts are for the most part based on implicit expectations and obligations (Bull, 1987; MacLeod & Malcomson, 1989; Baker, Gibbons & Murphy, 1997, 2002). Contracts in PBOs are at the *transactional* end of the continuum emphasizing short-term and mostly financial rewards that resemble market transactions (Inkson, Heising & Rousseau, 2001). PBOs benefit from flexibility in labor relations since contracts are limited in time but they do suffer from high transaction costs that are involved every time a new PBO has to be set up. Conversely, contracts in latent organization are at the opposite or *relational* end of the continuum

whose continuity provides it with a similar kind of task and rewarding flexibility as normal organizations such as Shell or Heineken.

The second theme in this thesis is the evolution of social networks and initial tie formation. Before latent organizations in project-based industries are able to emerge initial collaboration ties need to be created. Professionals in the film industry are generally freelancers or self employed subcontractors that are constantly forming and dissolving ties by setting up and completing film projects. The film industry can therefore be regarded as a dynamic network whose temporal configuration is driven by ties that form and dissolve in continuously changing alliances. Many of the earlier mentioned network studies – such as those on small world networks – focus on the structure of the network. Network structure research, in other words, studies the steady state or outcome of a dynamic process of tie formation and dissolution and neglects the underlying process of how the ties are formed in the first place. More recent social network studies apply a dynamic approach in studying the evolution of social networks. These studies model the evolution of social networks through statistically estimating the effects that drive tie formation in the first place (Snijders 2005, Steglich, Snijders & West, 2006).

One of the dynamics that drive the evolution of social networks is the tendency of individuals that are similar on certain characteristics to form ties (McPherson, Smith-Lovin & Cook, 2001). More specifically, similarity in the sense of status is an important predictor of tie formation between both individuals and organizations (Festinger, 1954; Ring & van de Ven, 1992). Collaborations or alliances can be explained by many different types of status. First, at the individual level status can be derived from constant actor attributes such as gender or sex (Ibarra, 1992). Second, positional status partly drives network dynamics since individuals or organizations that are close to one another in networks of prior alliances are more likely to form alliances themselves (Gulati, 1995a). Third, reputational status based on – successful – past performance is found to play an important role in the formation of collaboration ties (Podolny, 1994;

Chung, Singh & Lee, 2000). The dominant focus of this thesis is on this last type of reputational status.

The third theme of this thesis concerns the role of reputations in environments that are characterized by high uncertainty. One of the reasons behind transaction costs in market exchange is imperfect information. There is a high degree of uncertainty concerning possible alternatives and the outcome of the exchange in the long run. Reputations are an aid in dealing with this uncertainty. Reputations are important carriers of information in exchange relations, especially when it is difficult to determine the value or quality of a product beforehand (Podolny, 1993). Reputations are to a large extent based on the past quality or performance of exchange partners that serve as insurance in current exchanges. In addition, reputations are an important signal of legitimacy (Deephouse & Carter, 2005) and as such a valuable resource, for example, in attracting investment capital (Milgrom & Roberts, 1986; Fombrun & Shanley, 1990). The value of – certain types of – reputations depends on the particular institutional setting that defines the rules of the competitive process. Individuals or organizations are more likely, for example, to receive investment capital if they are deemed legitimate actors that fit the norms and expectation of the particular institutional environments in which they are active (DiMaggio & Powell, 1983).

Reputations are especially important in creative industries, such as the film industry, that are characterized by high demand uncertainty and high sunk costs that can not be retrieved in a second-best alternative uses (Caves, 2000). It might therefore be that collaboration or alliance formation in the film industry is driven by the ability of certain types of reputation to attract investment capital for new film projects. In the film industry, reputations can be derived from past performance of the films in which individuals have participated. This thesis distinguishes between three types of reputation; market, expert and peer, each indicating a different measure of past success in the eyes of a different audience (Hsu, 2006) or selector (Wijnberg & Gemser, 2000; Wijnberg, 2004). The value of certain types of reputation is higher when they fit the norms, standards, or evaluation criteria of the relevant audiences or selectors that

influence the outcome of the competitive process. In this thesis these reputations are derived from three sources of past success of the films in which film professionals participated: market reputation is a reflection of past box-office success, expert reputation of film critics' reviews, and peer reputation of success at award ceremonies such as the Oscars.

First, market reputation is derived from the most common measure of film success: commercial success at the cinemas that is often measured in terms of box-office (see for example: Delmestri, Montanari & Usai, 2005; Sorensen & Waguespack, 2006). This is the total number of visitors multiplied by the ticket price at the cinema. The most successful film in the Netherlands in 2007 was *Harry Potter and the Order of the Phoenix* with 1.322.000 visitors and a box office of €10.102.000. The most successful Dutch film in that year, and third overall, was *Alles is Liefde* with 1.214.000 visitors, or €9.147.000 in terms of box office. It is also one of the most commercially successful Dutch films ever. In the all time top 20 of Dutch films it ranks 13th. The most successful Dutch film ever is *Turks Fruit*, directed by Paul Verhoeven and produced by Rob Houwer, with a total number of visitors of 3.338.000 (Film Fund, 2008). For the sake of comparison the most successful film in the US domestic market in 2007 was *Spider Man 2* with a box-office of roughly €255.000.000 (MPAA, 2008)².

Second, expert reputation is derived from film success measured in terms of film critics' reviews. For filmmakers favorable critics' reviews can be a valuable measure of artistic success in its own right. In addition, reviews can also influence the commercial success of films at the box-office. In a study of the US film industry it was found that negative reviews hurt box-office performance more than positive reviews do good (Basuroy, Chatterjee & Ravid, 2003). In a study of Dutch films in their domestic market it was found that the number and the size of reviews increase the commercial success of art-house films in terms of box-office revenues, while a similar effect was not found for mainstream films (Gemser, van Oostrum & Leenders, 2007). Of the films released between 1998 and 2008, the most successful Dutch film in terms of critic's reviews in

² All market information of US films in this thesis was originally in dollars and converted at an exchange rate of €1 = \$1.32.

national newspapers was *Ja Zuster, Nee Zuster*. This film ranks 14th in terms of box-office or commercial success of all films released in the same period. For the sake of comparison, *Alles is Liefde*, the most commercially successful film released between 1998 and 2008, ranks 39th in term of critics' reviews out of a total of 168 films.

Third, peer reputation can be derived from awards (Gemser, Leenders & Wijnberg, 2008). The most prominent award ceremony in the film industry is that of the Academy Awards or Oscars. The jury deciding who is nominated and who wins an Oscar predominantly consists of peers, such as actors, directors and producers, who work or have worked in the film industry. Nominations and awards for the *Best Picture* Oscar significantly raise the box-office after the nominations have been made public (Nelson, Donihue, Waldman & Wheaton, 2001). Hollywood studios therefore spend large sums of money on advertising campaigns to push their films (Variety, 2008). In addition, film studios try to influence the votes of Academy members by organizing film screenings hosted by star actors and directors, by sending DVDs to the homes address of Academy members, and through direct phone calls to Academy members. The distributor of independent films, Miramax, was especially aggressive in their lobby to influence the jury. "They would sit there playing six degrees of separation: 'Who do you know who knows how to get to this person?'" (Biskind, 2004: p. 100). They were even accused of paying a number of influential Hollywood publicists who are also members of the Oscar jury, not to write about their films, but to lobby their Academy colleagues (Biskind, 2004: p. 369). The most successful films ever in terms of Oscars won are *Ben-Hur* (1959), *Titanic* (1997) and *The Lord of the Rings: The Return of the King* (2003), each of which won 11 Oscars. Three Dutch feature films won the Oscar for Best Foreign Language Film: *De Aanslag*, *Antonia*, *Karakter*. The Dutch equivalent of the Oscar, the Gouden Kalf, is handed out at the annual Dutch Film Festival. The Gouden Kalf jury also consists predominantly of industry peers.

The Dutch film industry, however, is small. This is mainly due to its small language market. In 2007 there were 26 local releases of Dutch feature films with an

average budget of €1.931.000. In contrast, the Hollywood studios³ released 179 films in the U.S. market with an average production budget of roughly €54.000.000, nearly 30 times that of Dutch films. The size of the Dutch domestic market in 2007 in terms of box-office was €159.000.000 (Film Fund, 2008), while the domestic market of the U.S. was €7.200.000.000 (MPAA, 2008), or 45 times larger than the Dutch. Besides the fact that non-English language films tend to be difficult to export to other language markets, Dutch films also face stiff competition from foreign – predominantly U.S – films on their home market. The domestic market share of Dutch films in 2007 was 13.4 %, while the market share of U.S. films was 65.3 % (Film Fund, 2008). This may have induced some successful Dutch filmmakers to pursue a career in Hollywood. An example is Paul Verhoeven, who directed the most successful Dutch film ever, *Turks Fruit*, which also received an Oscar nomination. Paul Verhoeven's success in Hollywood is somewhat reflected by the fact that he has a Bacon number of 1 since he directed the film *Hollow Man* starring Kevin Bacon.

Introduction of the papers

This thesis is a collection of four chapters based on four empirical studies carried out in close collaboration with my supervisor and co-author Nachoem Wijnberg. Each of these studies has the Dutch film industry as its empirical setting. In this thesis three different research methodologies were applied. First, interviews with Dutch film producers and directors were held in order to unravel how these individuals manage their professional industry network. Second, using statistical social network analysis an effort was made to model the evolution of collaboration networks of producers, directors and scriptwriters. Third, multiple regression analysis was used to determine

³ The total number of films released in the domestic US market was 590. These 179 films were released by MPAA members only: Paramount Pictures, Sony Pictures Entertainment Inc., Twentieth Century Fox Film Corporation, NBC Universal, Walt Disney Studios Motion Pictures, and Warner Bros Entertainment Inc.

the relative value of different types of reputations in attaining investment capital. The remainder of this thesis is structured as follows.

The first study, or chapter two, is an attempt to understand the organizational dynamics in single isolated project-based organizations (PBOs) and that of latent organizations of serially collaborating film professionals. Interviews with film producers were held to investigate their tendency or preference to form stable long-term relations with other film professionals and how they use contracts and rewards to govern both short and long-term relations. The findings show that many film professionals indeed tend and prefer to collaborate with a small number of individuals. Latent organizations are found to enjoy similar organizational benefits as normal organizations, such as lower transaction costs, more flexibility in dealing with unforeseen events, and more flexibility in kind and timing of rewards even though explicit long-term labor contracts are absent.

Chapter three is based on the second empirical study that models the evolution of the collaboration network of directors, producers and scriptwriters in the Dutch film industry. This study is important since initial tie formation is a precondition in order to be able to form the latent organizations that are the subject of chapter two. The effects of reputations on tie formation or network evolution are estimated while distinguishing between artistic reputations – or expert reputations – derived from film critics' reviews, and commercial reputations based on a return on investment measure. In addition, the effects on tie formation of other individual characteristics, such as age and sex, are estimated. Finally, the effect of the past network structure on the current network structures are estimated. The latter is important since being close to another person in a social network increases the chance of tie formation since friends of friends tend to become friends. The results show that artistic – not commercial – reputation is an important predictor of tie formation.

Chapter four examines the value of different types of reputation in the competitive process of obtaining investment capital for films. An individual ability to attract investment capital may partly explain the evolutionary dynamics of

collaboration networks as studied in the previous chapter. Selection system theory predicts that the value of each type of reputation in obtaining investment capital depends on whether or not it matches the dominant type of selector in the decision making process. Three types of reputation are constructed, derived from the performance of the films in which the actors were involved: Market reputation based on box-office success, peer reputation on awards won at the Dutch Film Festival, and expert reputation on critic's reviews. In turn, access to three sources of investment capital is examined: Film distributors representing market selectors, television broadcasters as expert selectors, and government subsidies from the Film Fund as peer selectors. The results show that expert reputations of producers and directors, based on favorable critics' reviews, have a positive effect on obtaining investment from broadcasters or expert selectors. In addition, producers with a market reputation for making commercially successful films receive more investment from film distributors that represent market selectors. Finally, some reputations that do not match the dominant type of selector have a negative effect on accessing investment capital.

Chapter five is concerned with organizational memory defined as the stock of knowledge within the boundaries of an organization that can improve organizational performance. This concept is closely related to the resource-based theory of the firm, even more the knowledge-based view, which explains performance differentials between organizations through their ability to create and protect knowledge, especially knowledge that is tacit, collective, and firm-specific and therefore difficult to imitate or transfer to other organizations. Two types of organizational memory are distinguished: Organizational *procedural* memory indicates organization-specific knowledge, while organizational *expectations* memory is the web of expectations of rewards within the organization and its members. The latter is a precondition for creating the former. The results show that, as opposed to the isolated project-based organizations, latent organizations in the film industry, in a similar fashion as normal organizations, are able to build and benefit from both types of organization memory.